

WHAT IS CLAIMED IS:

1. An air conditioning system having an indoor unit, an outdoor unit, and a system controller for controlling said indoor unit or outdoor unit and being arranged to execute communications between said indoor unit and said outdoor unit as transmitting a signal via a power line supplying electric power, comprising:

a leased communication line for connecting said outdoor unit with said system controller;

power line communication means provided in said indoor unit and being connected with said power line;

leased communication means provided in said outdoor unit and being connected with said leased communication line; and

a bridge for connecting said leased communication line with said power line; and

wherein control information is exchanged mutually between said indoor unit, said outdoor unit and said system controller.

2. An air conditioning system as claimed in claim 1, arranged to supply electric power to said indoor unit through a single-phase power line and to said outdoor unit through a three-phase power line, said single-phase power line being connected with said three-phase power line through said leased communication line.

3. An air conditioning system as claimed in

claim 1, wherein said bridge provides storage means, said storage means stores an address of said indoor unit being connected with said bridge, an address of said outdoor unit being connected with said bridge, and an address of another bridge being connected with said address, and said bridge performs conversion between the addresses for said leased communication line and the addresses for said power line.

4. An air conditioning system as claimed in claim 1, wherein said bridge provides protocol converting means.

5. An air conditioning system as claimed in claim 1, wherein said bridge is served to pass only the data oriented for the indoor unit being connected with said power line from said leased communication line side to said power line side.

6. An air conditioning system having a plurality of indoor units, at least one outdoor unit, and a system controller for controlling said indoor units and said outdoor unit and arranged to execute communications between said indoor units and said outdoor unit as transmitting a signal via a power line supplying electric power, comprising:

a leased communication line for connecting said outdoor units with said system controller;

power line communication means provided in each of said indoor units and being connected with said power line;

leased communication line means provided in said outdoor unit and being connected with said leased communication line; and

a bridge for connecting said leased communication line with said power line; and

wherein control information is exchanged mutually between said indoor units, said at least one outdoor unit and said system controller.

7. An air conditioning system as claimed in claim 6 arranged to supply electric power to said indoor units through a single-phase power line and to said outdoor unit through a three-phase power line, said single-phase power line being connected with said three-phase power line through said leased communication line.

8. An air conditioning system as claimed in claim 6, wherein said bridge provides storage means, said storage means stores an address of said indoor unit being connected with said bridge, an address of said outdoor unit being connected with said bridge, and an address of another bridge being connected with said bridge, and said bridge performs conversion between said addresses for said leased communication line and said addresses for said power line.

9. An air conditioning system as claimed in claim 6, wherein said bridge provides protocol converting means.

10. An air conditioning system as claimed in

claim 6, wherein said bridge is served to pass only data oriented for said indoor unit connected with said power line from said leased communication line side to said power line side.

11. An air conditioning system having an indoor unit, an outdoor unit, and a system controller for controlling said indoor unit or said outdoor unit and arranged to execute communications between said indoor unit and said outdoor unit as transmitting a signal via a power line supplying electric power, comprising:

a leased communication line for connecting said outdoor unit with said system controller;

high-speed communication means and an adapter provided in said indoor unit and being connected through a high-speed communication line;

said adapter being connected with said power line;

leased communication means provided in said outdoor unit being connected with said leased communication line; and

a bridge for connecting said leased communication line with said power line; and

wherein control information is exchanged mutually between said indoor unit, said outdoor unit and said system controller.

12. An air conditioning system as claimed in claim 11, arranged to supply electric power to said indoor unit through a single-phase power line and to

said outdoor unit through a three-phase power line, said single-phase power line being connected with said three-phase power line through said leased communication line.

13. An air conditioning system as claimed in claim 11, wherein said bridge provides protocol converting means.

14. An air conditioning system as claimed in claim 11, wherein said bridge is served to pass only data oriented for said indoor unit being connected with said power line from said leased communication line to said power line.